

Docket No.: 070602-0406



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PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of	:	Customer Number: 31824
Brian B. Jones	:	Confirmation Number: 9806
Application No.: 10/692,704	:	Group Art Unit: 2877
Filed: October 24, 2003	:	Examiner: Amanda H. Merlino
Patent No.: 7,119,903	:	
Issued: October 10, 2006	:	
For: METHOD AND SYSTEM FOR	:	
MEASURING DIFFERENTIAL	:	
SCATTERING OF LIGHT OFF	:	
OF SAMPLE SURFACES	:	

**Certificate**  
**JUN 15 2007**  
**of Correction**

Mail Stop Certificate of Correction  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**REQUEST FOR CERTIFICATE OF CORRECTION UNDER 37 CFR 1.322**

Sir:

In reviewing the above-identified patent, printing errors were discovered therein requiring correction in order to conform the Official Record in the application.

The errors noted is set forth on the two attached copies of form PTO-1050 Rev. 2-93 in the manner required by the Commissioner's Notice.

The changes requested herein occurred as a result of printing the Letters Patent and the Certificate should be issued without expense under Rule 322 of the Rules of Practice. Accordingly, Applicants request issuance of the Certificate of Correction.

**JUN 15 2007**

Please charge any shortage in fees due in connection with the filing of this paper to Deposit Account 502203 and please credit any excess fees to such deposit account.

Respectfully submitted,

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**Please recognize our Customer No. 31824  
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ORC 416445-1.070602.0406

**JUN 15 2007**

# UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO. : 7,119,903

DATED : October 10, 2006

INVENTOR(S) : Brian B. JONES

It is certified that errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

## IN THE SPECIFICATION:

Column 6, Line 55: remove "(i.e.," after "integrand"

Column 10, line 20, replace:  $\rho_{spec}^2 = \rho_0^2 - 2\rho_0 z_0 \cos \psi_0 \tan \theta_{spec} + z_0^2 \tan^2 \theta_{spec}$ .

with:  $\rho_{spec}^2 = \rho_0^2 - 2\rho_0 z_0 \cos \psi_0 \tan \theta_{spec} + z_0^2 \tan^2 \theta_{spec}$ .

Column 10, line 22, replace:  $0 \leq r \leq R$  with  $0 < r \leq R$

Column 10, line 23, replace:  $0 < \phi \leq 2\pi$  with  $0 < \phi \leq 2\pi$ .

Column 10, line 49, replace:  $\rho^2 = \rho_{spec}^2 + r^2 + \rho_{spec} r \cos \psi_{spec} \cos \phi + \rho_{spec} \sin \psi_{spec} r \sin \phi$ .

with:  $\rho^2 = \rho_{spec}^2 + r^2 + \rho_{spec} r \cos \psi_{spec} \cos \phi + \rho_{spec} \sin \psi_{spec} r \sin \phi$ .

Column 10, line 52, replace:  $\rho \leq R$  with  $\rho \leq R$

Column 10, line 55, replace:  $\frac{R^2 - \rho_{spec}^2 - r^2}{\rho_{spec}^r} \geq \cos \psi_{spec} \cos \phi + \sin \psi_{spec} \sin \phi$ .

with:  $\frac{R^2 - \rho_{spec}^2 - r^2}{\rho_{spec}^r} \geq \cos \psi_{spec} \cos \phi + \sin \psi_{spec} \sin \phi$ .

Column 10, line 59, delete equation:  $\geq \cos \psi_{spec} \cos \phi + \sin \psi_{spec} \sin \phi$ .

Column 11, line 5, replace:  $\frac{R^2 - \rho_{spec}^2 - r^2}{\rho_{spec}^r} \geq \cos \psi_{spec} \cos \phi + \sin \psi_{spec} \sin \phi$ .

with:  $\frac{R^2 - \rho_{spec}^2 - r^2}{\rho_{spec}^r} \geq \cos \psi_{spec} \cos \phi + \sin \psi_{spec} \sin \phi$ .

Column 11, line 10, delete equation:  $\geq \cos \psi_{spec} \cos \phi + \sin \psi_{spec} \sin \phi$ .

Column 12, line 7, replace:  $\beta'^2 = \frac{z_0^2}{z_0^2 + r^2} - \frac{2z_0 \sin \theta_0}{\sqrt{z_0^2 + r^2}} + \sin^2 \theta_0$

$$\text{with: } \beta'^2 = \frac{z_0^2}{z_0^2 + r^2} - \frac{2z_0 \sin \theta_0}{\sqrt{z_0^2 + r^2}} + \sin^2 \theta_0$$

Column 12, line 20, replace:  $\frac{d\beta'}{dr} = \left( \frac{z_0^2}{z_0^2 + r^2} - \frac{2z_0 \sin \theta_0}{\sqrt{r^2 + z_0^2}} + \sin^2 \theta_0 \right)^{-\frac{1}{2}} \left( \frac{z_0^2 r}{(z_0^2 + r^2)} - \frac{z_0 r \sin \theta_0}{(z_0^2 + r^2)^{(3/2)}} \right)$

$$\text{with: } \frac{d\beta'}{dr} = \left( \frac{z_0^2}{z_0^2 + r^2} - \frac{2z_0 \sin \theta_0}{\sqrt{r^2 + z_0^2}} + \sin^2 \theta_0 \right)^{-\frac{1}{2}} \left( \frac{z_0^2 r}{(z_0^2 + r^2)} - \frac{z_0 r \sin \theta_0}{(z_0^2 + r^2)^{(3/2)}} \right)$$

Column 12, line 37 replace:  $\frac{dp}{d\Omega} = \frac{1}{I_s l(r) r} \left( \frac{d\beta'}{dr} \right) \frac{dBRDF}{d\beta'}$ .

$$\text{with: } \frac{dp}{d\Omega} = \frac{1}{I_s \ell(r) r} \left( \frac{d\beta'}{dr} \right) \frac{dBRDF}{d\beta'}$$

Column 13, line 63, replace:  $BRDF = \int_{b^*} \frac{dp(|\beta - \beta_0|)}{d\Omega} \sqrt{k_1} \left| \frac{\partial(\theta, \phi)}{\partial(k_1, k_2)} \right| dk_1 dk_k$ .

$$\text{with: } BRDF = \int_{b^*} \frac{dp(|\beta - \beta_0|)}{d\Omega} \sqrt{k_1} \left| \frac{\partial(\theta, \phi)}{\partial(k_1, k_2)} \right| dk_1 dk_2$$

Column 15, line 3, replace:  $\frac{\partial \phi}{\partial k_1}$ , with:  $\frac{\partial \phi}{\partial k_2}$ ,

Column 15, lines 32-33,

replace:  $\cos^{-1}(\sin \theta_1 \cos \phi_1 \sin \theta_2 \cos \phi_2 + \sin \theta_1 \sin \phi_1 \sin \theta_2 \sin \phi_2 + \cos \theta_1 \cos \theta_2) \leq \alpha$

with:  $\cos^{-1}(\sin \theta_1 \cos \phi_1 \sin \theta_2 \cos \phi_2 + \sin \theta_1 \sin \phi_1 \sin \theta_2 \sin \phi_2 + \cos \theta_1 \cos \theta_2) \leq \alpha$

Column 16, line 37, replace: "l(r)" with  $\ell(r)$

Column 16, line 45, replace:  $\geq \cos \psi_{spec} \cos \phi + \sin \psi_{spec} \sin \phi$ , and

with:  $\geq \cos \psi_{spec} \cos \phi + \sin \psi_{spec} \sin \phi$ , and

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Column 16, line 50, replace:  $\frac{d\rho}{d\Omega} = \frac{1}{I_s l(r)r} \left( \frac{d\beta'}{dr} \right) \frac{dBRDF}{d\beta'}$ .

with:  $\frac{d\rho}{d\Omega} = \frac{1}{I_s \ell(r)r} \left( \frac{d\beta'}{dr} \right) \frac{dBRDF}{d\beta'}$ .

Column 17, line 19, delete: “; and”

Column 17, line 20, replace:  $\rho_{spec}^2 = \rho_0^2 - 2\rho_0 z_0 \cos \psi_0 \tan \theta_{spec} + z_0^2 \tan^2 \theta_{spec}$

with:  $\rho_{spec}^2 = \rho_0^2 - 2\rho_0 z_0 \cos \psi_0 \tan \theta_{spec} + z_0^2 \tan^2 \theta_{spec}$

Column 17, line 22, add: “; and” before “(c)”.

Column 17, line 30,

replace:  $\cos^{-1}(\sin \theta_1 \cos \phi_1 \sin \theta_2 \cos \phi_2 + \sin \theta_1 \sin \phi_1 \sin \theta_2 \sin \phi_2 + \cos \theta_1 \cos \theta_2) \leq \alpha$

with:  $\cos^{-1}(\sin \theta_1 \cos \phi_1 \sin \theta_2 \cos \phi_2 + \sin \theta_1 \sin \phi_1 \sin \theta_2 \sin \phi_2 + \cos \theta_1 \cos \theta_2) \leq \alpha$

IN THE CLAIMS:

Column 21, line 15, replace:  $BRDF = \frac{1}{P_i} \frac{1}{\Omega_i} \int_{\Omega_i} \int_{Area} \int_{\Omega_d} \frac{d^2 P_i}{d\Omega_i dA} \frac{dp_d(\Omega_i, \Omega_d, A)}{d\Omega_d} d\Omega_i dA d\Omega_d$ ,

with:  $BRDF = \frac{1}{P_i} \frac{1}{\Omega_i} \int_{\Omega_i} \int_{Area} \int_{\Omega_d} \frac{d^2 P_i}{d\Omega_i dA} \frac{dp_d(\Omega_i, \Omega_d, A)}{d\Omega_d} d\Omega_i dA d\Omega_d$ ,

Column 21, line 29, replace “ $P_i$  is incident power of the electromagnetic radiation.”

with --  $P_i$  is the incident power of the electromagnetic radiation.--

Column 21, line 58, remove: “for” after “ $|\beta - \beta_0| = \theta_i + \theta_d$ ”.

Column 21, line 59, add: “for” before “being”.

Column 21, line 65, replace:  $BRDF = \int_{\Omega} \frac{dp(|\beta - \beta_0|)}{d\Omega} \sqrt{k_1} \left| \frac{\partial(\theta, \phi)}{\partial(k_1, k_2)} \right| dk_1 dk_2$ ,

with:  $BRDF = \int_{\Omega} \frac{dp(|\beta - \beta_0|)}{d\Omega} \sqrt{k_1} \left| \frac{\partial(\theta, \phi)}{\partial(k_1, k_2)} \right| dk_1 dk_2$ ,

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